

Amendment to the Claims:

The claims under examination in this application, including their current status and changes made in this paper, are respectfully presented.

Claims 1 – 8 (canceled).

9 (currently amended). A digital subscriber line communications system, comprising:
a first communications facility, comprising:

a first twisted-wire pair;

a second twisted-wire pair;

a second communications facility, comprising a fiber optic facility;

a central office modem, comprising:

a first transceiver, for receiving and demodulating signals in a first frequency band ~~over the first twisted-wire pair~~, and for modulating and transmitting signals in a second frequency band ~~over the first twisted-wire pair~~, wherein the data rate of the signals received by the first transceiver is significantly lower than that of the signals transmitted by the first transceiver;

a second transceiver, for receiving and demodulating signals in a third frequency band ~~over the second twisted-wire pair~~, and for modulating and transmitting signals in a fourth frequency band ~~over the second twisted-wire pair~~, wherein the data rate of the signals received by the second transceiver is significantly higher than that of the signals transmitted by the second transceiver;

a network interface, for interfacing the first and second transceivers to ~~a network~~
the second communications facility;

a concentrator, coupled to the first and second communications facilities, comprising:

analog-to-digital converter circuitry, for converting analog signals received over the first and second twisted-wire pairs to digital signals;

digital-to-analog converter circuitry, for converting digital signals into analog signals for transmission over the first and second twisted-wire pairs;

modulator and demodulator circuitry, for modulating and demodulating signals communicated between the communications facility and the first and second twisted-wire pairs, so that the signals communicated over the first and second twisted-wire pairs are modulated according to a discrete multi-tone modulation; and

a concentrator function, coupled to the first and second twisted-wire pairs and to the second communications facility; and

a central processing unit, coupled to the concentrator function, for assigning the first and second twisted-wire pairs to a communications service provider associated with the customer serviced by the first and second twisted-wire pairs, the first and second transceivers at the central office also associated with that communications service provider;

a customer premises equipment modem associated with a customer, comprising:

a third transceiver, for modulating and transmitting signals in the first frequency band over the first twisted-wire pair, and for receiving and demodulating signals in the second frequency band over the first twisted-wire pair, wherein the data rate of the signals received by the third transceiver is significantly higher than that of the signals transmitted by the third transceiver;

a fourth transceiver, for modulating and transmitting signals in the third frequency band over the second twisted-wire pair, and for receiving and demodulating signals in the fourth frequency band over the second twisted-wire pair, wherein the data rate of the signals transmitted by the second transceiver is significantly higher than that of the signals received by the second transceiver; and

a host interface, for interfacing the third and fourth transceivers to a network.

Claims 10 – 14 (canceled).

15 (original). The system of claim 9, wherein the first and fourth frequency bands are substantially identical.

16 (original). The system of claim 15, wherein the second and third frequency bands are substantially identical.

17 (original). The system of claim 9, wherein the first and second frequency bands do not overlap;

and wherein the second frequency band covers higher frequencies than the first frequency band.

18 (original). The system of claim 17, wherein the third and fourth frequency bands do not overlap;

and wherein the third frequency band covers higher frequencies than the fourth frequency band.

19 (canceled).

20 (original). The system of claim 9, wherein the first and second twisted-wire pairs are disposed within a common sheath.

Claims 21 – 26 (canceled).